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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,109

09/25/2006

Ulrich Mundwiler

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07/21/2008

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EXAMINER

MAI, HAO D

ART UNIT

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3732

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,109	Applicant(s) MUNDWILER ET AL.	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/25/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/25/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 17-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The claims recite the limitations “the axis of the dental implant” (e.g. line 7 of claim 17; line 4 of claim 21, etc.), and “the axis” (e.g. line 3 of claim 30), both of which lack sufficient antecedent bases. It is also unclear to which axis of the dental implant the applicant is referring as the dental implant may have multiple different axes.
- Claims 17 and 18 each recites “an abutment” (line 2 of claim 17; lines 1-2 of claim 18). It is unclear whether it is one same abutment or two different abutments being claimed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Folsom, Jr. et al. (6,102,702).

Regarding claim 17, Folsom et al. discloses a dental implant 10 including a bore 17 in the form a blind hole, the bore being shaped and devised so that it is capable of rotationally securing an abutment receivable in the dental implant; wherein bore 17 is provided with a substantially cylindrical sleeve 31 extending substantially coaxially to the dental implant (Figs. 1-2). Note that the dental implant 10 is shown to include an inner neck surface 18 that extends downward to a portion of the inner surface of the bore 17 (Fig. 1). An intersection curve between the inner neck surface and the sleeve, e.g. the curve the follows the angled top part of the sleeve 31, does not lay in a plane perpendicular to the axis of the dental implant (Figs. 1-2).

As to claims 18, abutment 13 is shown to have a downwardly extending protrusion 15 with a lower surface exactly matching the dental implant's inner neck surface 18.

5. Claims 17-19, 21-22, 27-28, 30-31, and 46, are rejected under 35 U.S.C. 102(b) as being anticipated by Sopian (2003/0224328 A1).

Regarding claim 17, Sopian discloses a dental implant (Figs. 6-8) including a bore 109 in the form a blind hole, the bore is being shaped and devised so that it is capable of rotationally securing an abutment receivable in the dental implant; wherein bore 109 is provided with a substantially cylindrical sleeve/abutment tube 128 extending substantially coaxially to the dental implant. With the cradle portion 105 being the neck portion of the dental implant (Fig. 7), an inner neck surface would include the top surface of 105 and a top portion of the inner thread 110 (Fig. 7). An intersection curve between the inner neck surface and the sleeve (such curve being the one that follows the outer threads of sleeve 128 from the top surface 105 to the top portion of inner thread 110) does not lay in a plane perpendicular to the axis of the dental implant.

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As to claims 18-19, Sapien discloses a base 172 capable of being an abutment, having a downwardly extending protrusion with a lower surface exactly matching the inner neck surface of the dental implant (Fig. 8); wherein when assembled the downwardly extending protrusion surrounds the sleeve 128 and the lower surface rests on the inner neck surface (Fig. 8).

As to claims 21-22, best shown in Figure 1, the implant has a bone tissue apposition surface 3 extending from a tip 12 up to an interface at a neck/cradle portion 5 of the dental implant, and a soft tissue apposition surface (the outer surface of portion 5) extending from the interface to a shoulder (the perimeter of the top surface of portion 5); the shoulder is inclined with respect to the axis of the dental implant and is substantially contained in a plane. As to claims 27-28, and 30, the interface (best shown as the bottom of portion 5) is substantially parallel to the shoulder; and having a curved profile which is increasing from the labial side towards the interdental side and decreasing towards the palatal/lingual side (Fig. 1).

As to claims 31 and 46, Figure 6 shows the cylindrical sleeve 128 being provided with one or more slits (at the top of the sleeve, near 140), capable of allowing compression of the cylindrical sleeve.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20, 23-26, and 29, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sapien (2003/0224328 A1).

Sapien discloses the invention substantially as claimed. Sapien also discloses a nut 150 and a plug 160 disposed *onto* the sleeve 128 (Fig. 8). However, Sapien fails to disclose a screw which fits *into* the sleeve with no or very little play (claim 20). Sapien is also silent to inclination of the shoulder being in the range from about 60 - 80, 65 - 75, or 70 (claims 23-25). Sapien also fails to disclose the neck portion having a larger extension on the palatal/lingual side than on the labial side (claim 26). Sapien also fails to disclose the interface being substantially perpendicular to the axis (claim 29).

As to claim 20, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sapien by replacing the nut 150 and plug 160 with a screw which fits into the sleeve with no or very little play; such modification is merely a suitable alternative substitution of part(s), well within the skill of an artisan. Furthermore, such modification would also have been obvious since it has been held to be within the general skill of a worker in the art to select a known material/part (a cover screw) on the basis of its suitability for the intended use (covering the implant's bore) as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

As to claims 23-25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the inclination of the shoulder with the claimed ranges since it has been held that discovering an optimum value of result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). See MPEP §§ 2144.05.

As to claims 26 and 29, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sapien by including a larger extension on the palatal/lingual side of the neck portion; and having the interface between portions 3 and 5 (Fig.

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1) substantially perpendicular to the implant's axis. Such modifications are merely changes in shape and/or configurations, which is a matter of design choice well within the skill of an artisan in order to obtain optimum results. See MPEP § 2144.04.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 17-30, and 32-45, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3-6, and 9-14 of U.S. Patent No. 7,329,124.

Regarding the application claims 17-26, 28, 30, 32-34, 36-41, 43, and 45, these claims are broader than and thus would be obvious over the patent claims in view of *In re Goodman*. For example, it is clear that all the elements of claim 17 of the application can be found in the patent claim 3; the difference between claim 17 of the application and claim 3 of the patent lies in the fact that the patent claim includes much more elements and is thus much more specific. Thus the invention of claim 3 is in effect a "species" of the "generic" invention of claim 17. It has been held that the generic invention is "anticipated" by the "species". *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993). The same reasoning and case law are applied to the rest of the conflicting claims.

Regarding the application claims 27, 29, 35, 42, and 44, the patent claims do not include: the interface being substantially parallel to the shoulder (application claims 27 and 42) or substantially perpendicular to the axis (application claims 29 and 44), and the screw fitting into the sleeve (application claim 35 as applied to claims 32-34). Nevertheless it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the interface substantially parallel to the shoulder or substantially perpendicular to the implant's axis since such modifications are merely changes in shape and/or configurations, which is a matter of design choice well within the skill of an artisan in order to obtain optimum results. See MPEP § 2144.04. Furthermore, it is well known in the dentistry field to include a cover screw fitted into an implant's bore in order to cover the bore; it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a cover screw fitted into the sleeve with little or no play in order to cover the implant's bore.

10. Claims 31 and 46 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3-6 of U.S. Patent No. 7,329,124 in view of Sapien (2003/0224328 A1).

The patent claims do not include the cylindrical sleeve having one or more slits. Sapien discloses an implant including a cylindrical sleeve 128 having slits at the top (Fig. 6; also see rejection under Sapien detailed above with respect to claim 31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the patent claims by including slits to the cylindrical sleeve as taught by Sapien so that the slits would allow for compression of the cylindrical sleeve.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hao D Mai/
Examiner, Art Unit 3732

**/John J Wilson/
Primary Examiner, Art Unit 3732**